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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,999	02/02/2001	Paul Stiros	8412	7441

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EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/775,999	Applicant(s) STIROS ET AL.	
	Examiner MONZER R CHORBAJI	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This final action is in response to the amendment received on 11/18/2004

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-8, 11-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959) and further in view of Aibe et al (U.S.P.N. 5,288,306).

With respect to claims 1, 11 and 14, the Aibe ('548) reference teaches the following: an air-deodorizing system (figure 3, 31) and a method (col.20, test example 3), which includes providing an air filter member (figure 3, unlabeled entire filter structure made up of 36 and the filter medium, which is disposed in upper part of 35), a first filter element (figure 3, 36) with a filter medium (col.4, lines 5-7), an air moving member (figure 3, 35) that draws air through at least a portion of the filter element (figure 3, 36, the arrows, and 38) such that the filter member is detachable from it (figure 1, 6 and col.13, lines 35-38) such that the air filter member is arranged with the filter element (air flows through both structures, arrows in figure 3, since both structures are arranged next to each other creating an air flow path) in interaction with the air flowing along the air flow path, positioning the filter member inside a confined space (col.12, lines 67-68 and col.13, lines 1-2), and neutralizing odor in the air of the confined space. However, with respect to claims 1, 11 and 14, the Aibe ('548) reference fails to disclose the use of sodium bicarbonate and the use of a second filter member used interchangeably with the first filter member. With respect to claims 1 and 11, the Bermas reference discloses the use of sodium bicarbonate in deodorizing the inside of refrigerators (col.1, lines 49-54) but fails to teach the use of a second filter member used interchangeably with the first filter member. With respect to claims 1, 11 and 14, the Aibe ('306) reference teaches multiple filter members (figure 23, 195 and 196)

having filter elements that can be interchangeably used (col.8, lines 39-40 and col.11, lines 3-6) relative to the air-moving member (figure 23, 194) by being detachable. Also, the Aibe ('306) reference discloses using various distinct filter mediums (figure 1, 6 and 7). Thus, it would have been obvious to one having ordinary skill in the art to modify the method and apparatus of the Aibe ('548) reference to include multiple filter members since utilizing a plurality of filter members having varying adsorbent affinities for malodorous components, even a gas containing many kinds of malodorous or toxic components can be efficiently eliminated (Aibe et al '306, col.8, lines 41-45).

Furthermore, with respect to claims 1, 11 and 14, regarding the use of both passive and active deodorizers together, the Bermas reference, which is in the art of deodorizing the air in refrigerators (col.1, lines 11-15) using passive deodorizers (figure 1, 10) that deodorize air without the assistance of air moving member teaches that combining activated carbon and sodium bicarbonate is known in the art of deodorizing refrigerators (col.1, lines 49-54). Thus, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe et al in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claims 2-4, the Aibe ('548) reference teaches the following: the filter member (figure 2, 7) includes a cartridge (figure 1, 6) which has a top portion and a bottom portion (figure 2, such parts of 6 are not labeled), also the cartridge has air inlets in its top (figure 2, top portion of 6 is not labeled) and air outlets on its bottom (figure 2, bottom portion of 6 is not labeled), the air moving member (figure 2, the lower part of 2

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which includes a fan) has a top portion (serves as a base for the filter member) with an air inlet therein (figure 2, top portion of the lower part of 2 on which 7 lies directly above), the cartridge (figure 1, 6) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member, the air moving member includes a fan (figure 2, 8).

With respect to claim 5, the Bermas reference teaches the use of sodium bicarbonate (col.1, lines 49-54) and further discloses that Frazier teaches that it is known in the art of air fresheners to use deodorizers in granular form so that a fan can draw air through the filter (sufficiently pervious) to remove odors (col.2, lines 11-17). Thus, one skilled in the art would have been motivated to modify Aibe et al. apparatus to include a known deodorizer such as sodium bicarbonate in granular form such that it is sufficiently pervious for the system to operate.

With respect to claims 6-7, the Bermas reference teaches the following: filter element (figure 2, 10) includes a container (figure 2, 40) with at least two air pervious sides (figure 4, 40 has two unlabeled sides), which contains sodium bicarbonate (col.1, line 51), the container is a bag (col.4, lines 51-52) made of air pervious material with sodium bicarbonate therein, and the filter medium includes activated carbon (col.4, line 41).

With respect to claim 8, the Aibe ('548) reference discloses the use of activated carbon as part of the filter medium (col.4, lines 5-6).

With respect to claim 12, the Aibe ('548) reference teaches that the confined space is inside a refrigerator (col.20, lines 22-23).

With respect to claims 13 and 15, the Aibe ('548) reference discloses that the device can be used in a refrigerator (col.20, lines 22-23), which intrinsically includes compartments separate from the remainder of the confined space. Thus, in order to deodorize air in a refrigerator, inserting the device in the compartments or in the main section of the refrigerator is an intrinsic step in achieving such a goal. However, the Aibe ('548) reference fails to disclose the use of sodium bicarbonate. The Bermas reference teaches the use of a passive filter member (figure 1, 10), which includes sodium bicarbonate (col.1, line 51) to deodorize air in a refrigerator. As a result, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe in order to optimize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

With respect to claim 17, the Aibe ('548) reference teaches the following: the air moving member (figure 2, the lower part of 2 which includes a fan) has a top portion (serves as a base for the filter member) that is exposed to the outside environment either by having outside air run across it or when removing the filter member with an air inlet therein (figure 2, top portion of the lower part of 2 on which 7 lies directly above), the cartridge (figure 1, 6) sits on the top portion of the air moving member such that the air outlets on the bottom of the cartridge partially in alignment with the air inlet on the air moving member, the air moving member includes a fan (figure 2, 8). Furthermore, the filter member is intrinsically held in place by the gravitational forces (suction of the fan) and the surface topology of the interfacing parts of the filter member and the air-moving

member. In addition, Aibe et al ('548) teaches that the location of the fan, the cartridge, the inlets, and the outlets can be varied (col.9, lines 32-51 and col.14, lines 21-31).

5. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aibe et al (U.S.P.N. 5,403,548) in view of Bermas (U.S.P.N. 5,772,959) and further in view of Aibe et al (U.S.P.N. 5,288,306) and Ganz (U.S.P.N. 2,025,657).

With respect to claim 18, the Aibe ('548) reference, the Bermas reference and the Aibe ('306) reference all fail to teach the concept of having complementary hemispherical interfacing parts between the filter member and the air-moving member. The Ganz reference discloses a hemispherical filter member (figure 1, 10 and 12) for deodorizing air (col.1, lines 5-6). Thus, It would have been obvious to one having ordinary skill in the art to modify the air-moving member of Aibe ('548) reference to include a spherical filter member since such a shape has an attractive appearance (Ganz, col.1, lines 16-18).

With respect to claim 19, the filter member (36) of Aibe ('548) reference is lifted upward from the air-moving member (35) for replacement (col.13, lines 35-38).

With respect to claim 20, the Ganz reference discloses an emitting member (sachet container) including a scent (i.e., fragrance, col.1, lines 47-49) to be emitted into the atmosphere.

Remarks

6. The 35 U.S.C.112, second paragraph rejection has been withdrawn. Also, the terminal disclaimer received on 11/18/2004 has been accepted.

Response to Arguments

7. Applicant's arguments filed 11/18/2004 have been fully considered but they are not persuasive.

On page 8 of the Remarks section, applicant argues that, "None of the references, alone or in combination, teach or suggest combining an active air filter with a passive air filter." The examiner disagrees. The Aibe ('548) reference teaches the use of an active filter (36 and 38). The Bermas reference discloses (col.1, lines 49-55) that combinations of various odor controllers (passive air filters) including activated carbon and sodium bicarbonate are known to be used together to treat air within refrigerators. As a result, it would have been obvious for a person having ordinary skill in the art of deodorizing air in the refrigerators to utilize the teachings of Bermas to Aibe et al ('548) in order to maximize the rate of deodorization of air inside refrigerators by combining a passive deodorizer (second filter member) and an active deodorizer (a first filter member inside an air moving part).

On page 9 of the Remarks section, applicant argues that, "Bermas does not suggest two filters. Certainly, Bermas does not suggest two different kinds of filters." The Bermas reference is only combined to show that combinations of baking soda and activated carbon materials and the use of passive filters are known in the art of deodorizing air within refrigerators and not for using two different types of filters.

On page 9 of the Remarks section, applicant argues that, "First, there is no teaching or suggestion in the references that there is a need to maximize the rate of deodorization." The effects of each reference in deodorizing air within refrigerators is known such that the synergistic combination of both reference is obvious and

predictable in increasing the rate of deodorization that each reference teaches. As a result, one having ordinary skill in the art at the time the invention was made to utilize the teachings of Bermas to Aibe et al in order to maximize the rate of deodorization of air inside refrigerators by combining passive and active deodorizers.

On page 9 of the Remarks section, applicant argues that, "Secondly, if one wanted to increase the deodorization of Bermas to Aibe, they would have many choices-bigger filters, stronger fans, more potent odor controlling compositions, etc. Multiple filters is not necessarily a logical or obvious choice when seeking to increase the rate of deodorization. Finally, if multiple filters were a chosen method, one skilled in the art would increase the same device that has been taught to be effective. In Bermas, multiple passive filters could be used, In Aibe, multiple active filters." Each reference deodorizes air differently. The Aibe et al reference uses the active known approach with its advantages and the Bermas reference uses the passive known approach with its advantages as well. Thus, combining two standard approaches that are known to deodorize air result in an obvious and expected synergistic result, which better deodorization of air within refrigerators. Thus, one having ordinary skill in the art reading both references would only be motivated to combine the two approaches for the synergistic effect of improved air deodorization and would not be motivated to use other choices as mentioned above.

On page 9 of the Remarks section, applicant argues that, "There is no motivation given for one skilled in the art to pursue a higher rate of deodorization." The examiner disagrees. Improving the rate of deodorization is always a goal for a person having an

ordinary skill in the art of removing malodorous scent within refrigerators since such an improvement results in various food types to maintain their original taste.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 6:30-3:00.
11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monzer R. Chorbaji **MRC**
Patent Examiner
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